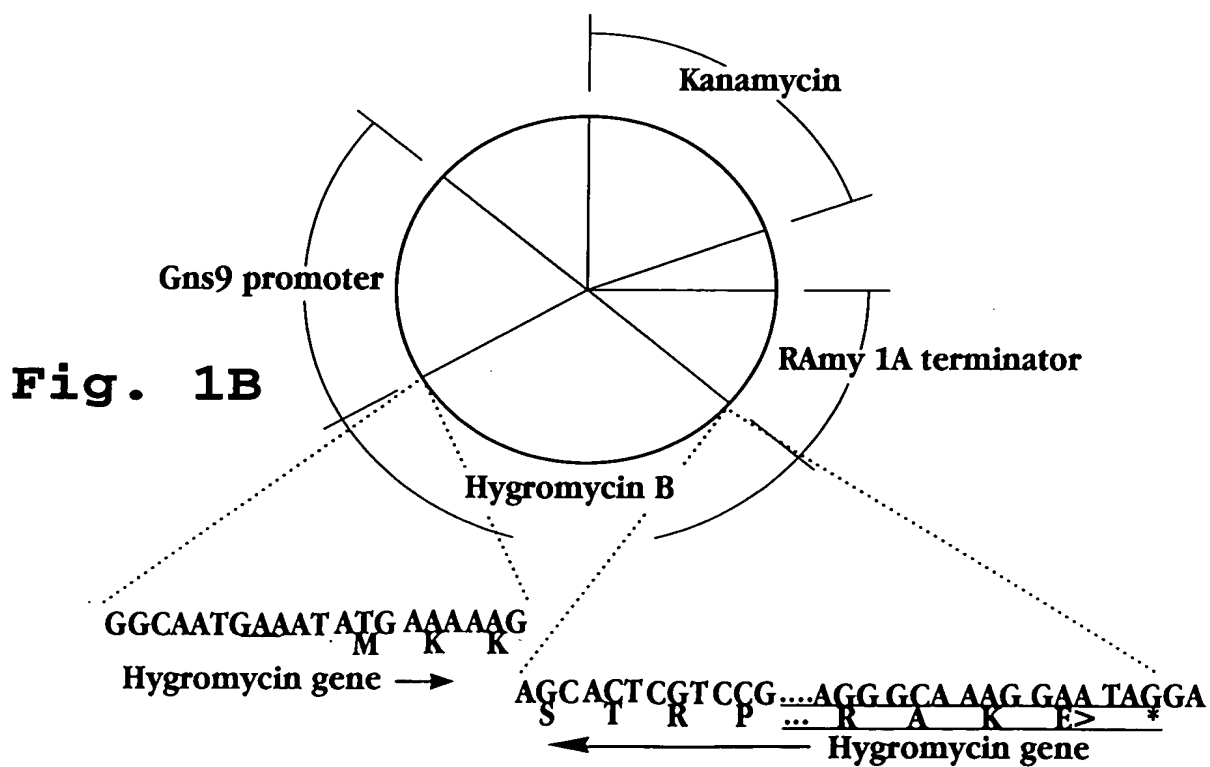
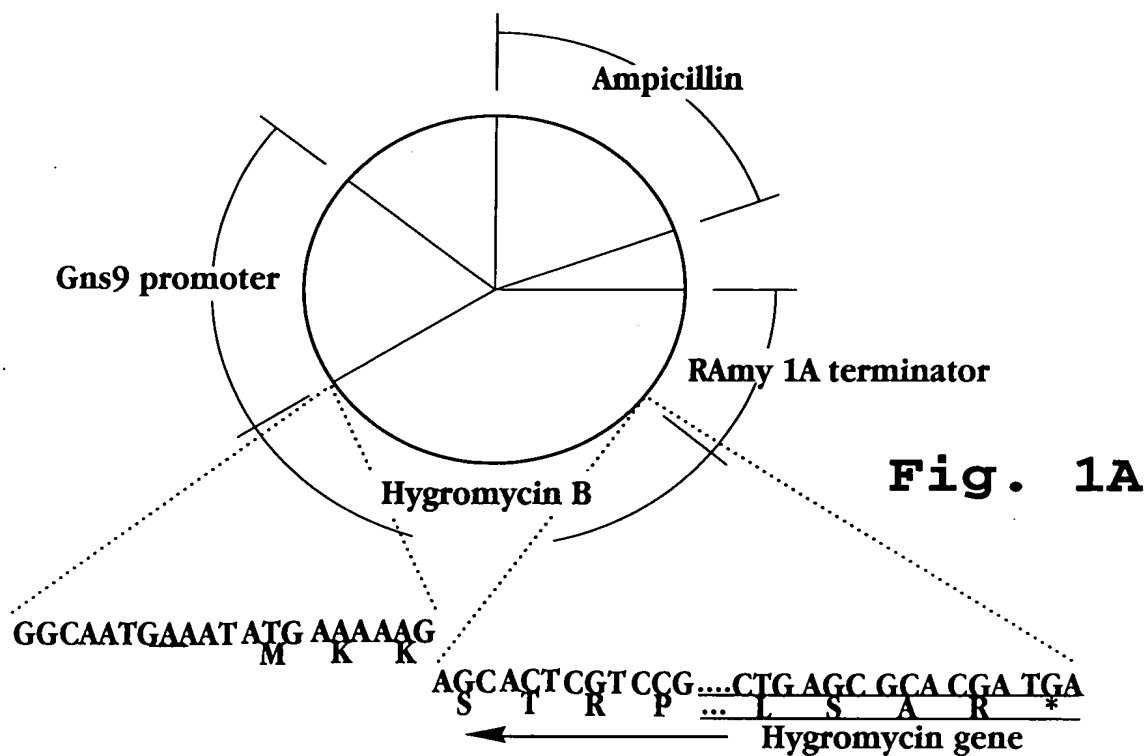


090323ZB 081701
TO 2280 8223660



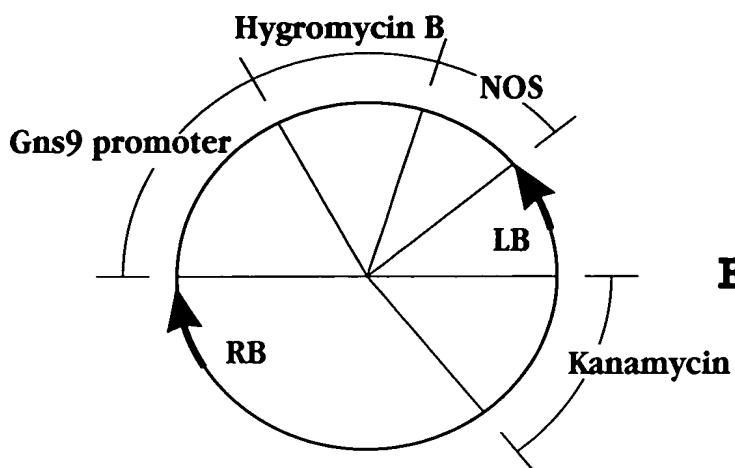


Fig. 1C

Fig. 3A

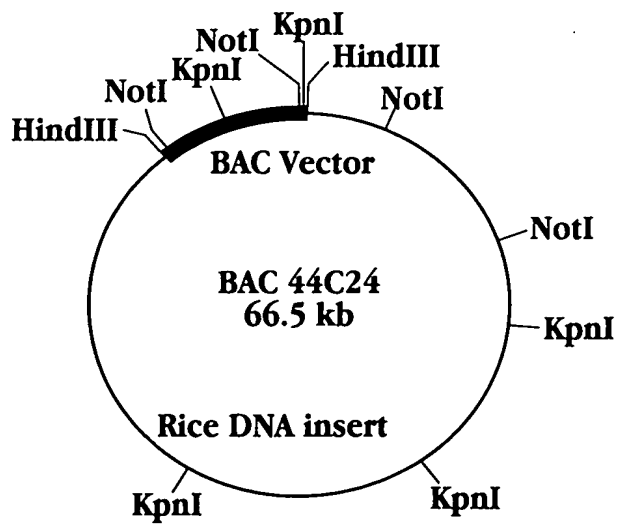
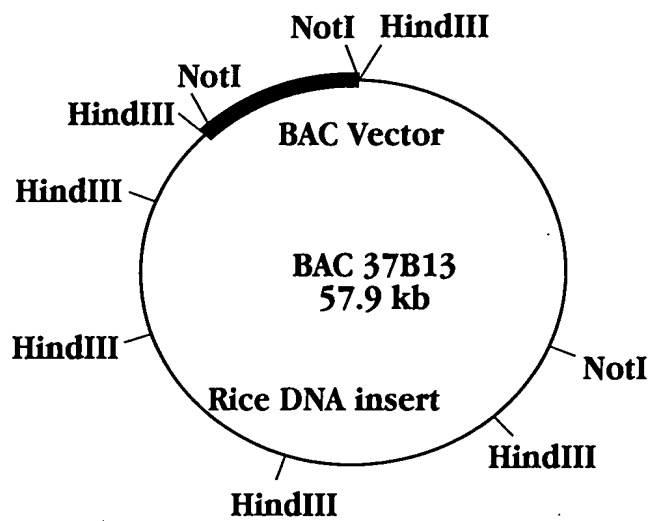


Fig. 3B

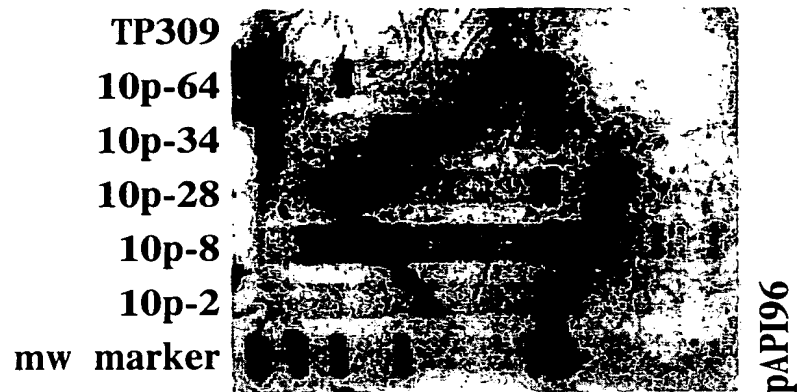


Fig. 2C

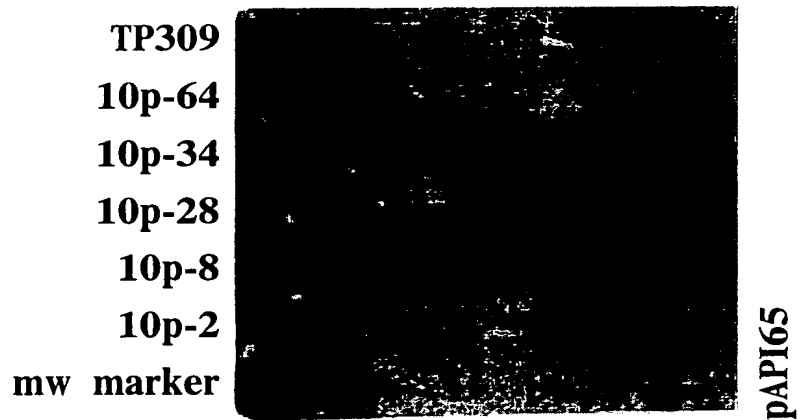


Fig. 2B

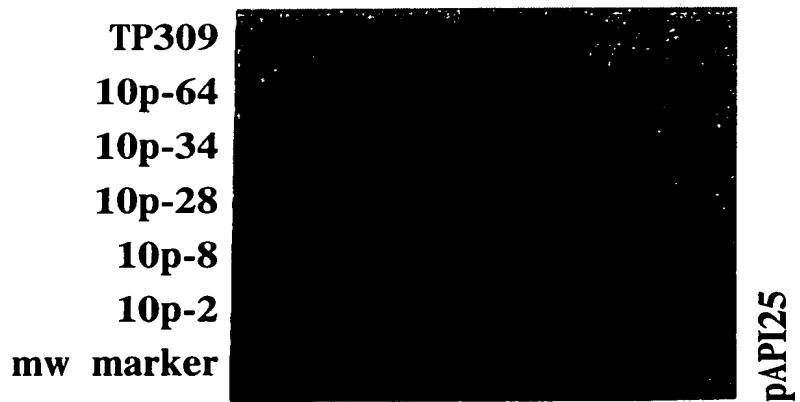


Fig. 2A



Fig. 2F

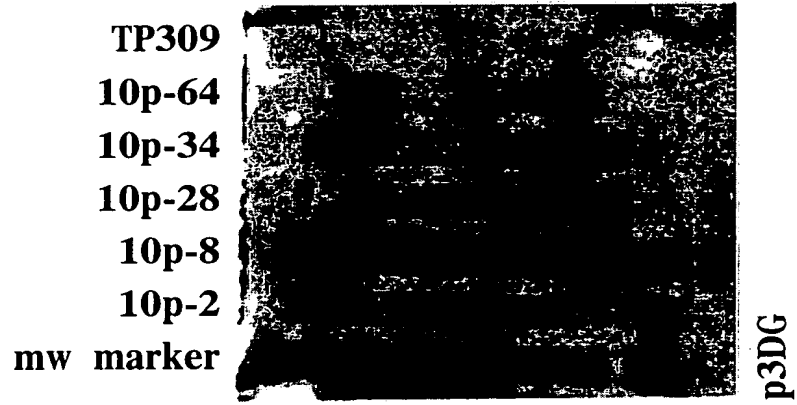


Fig. 2E

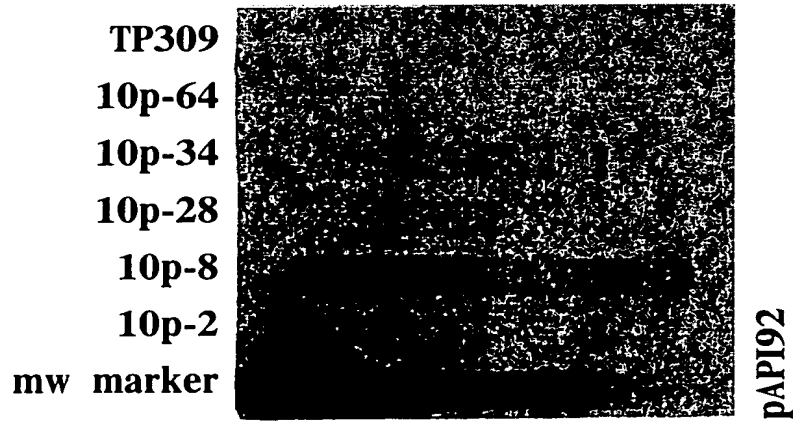


Fig. 2D

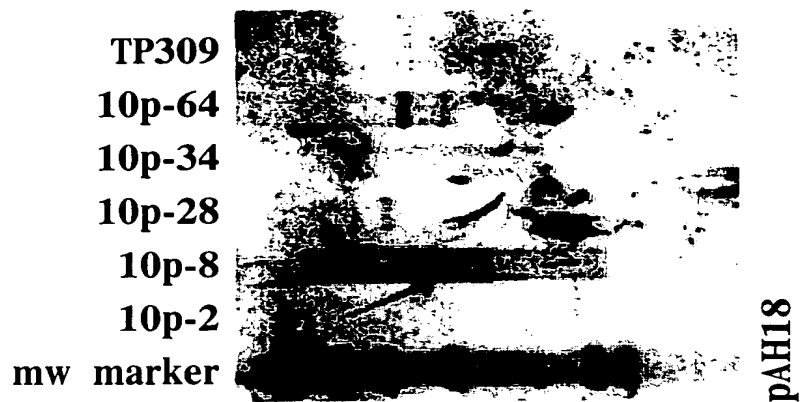


Fig. 2I

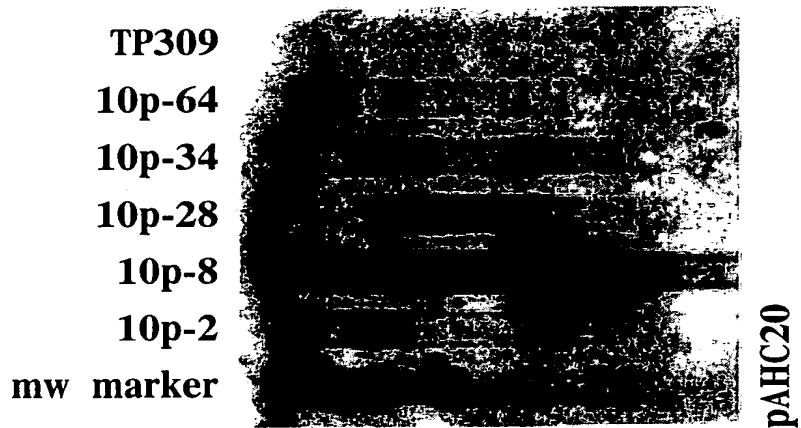


Fig. 2H

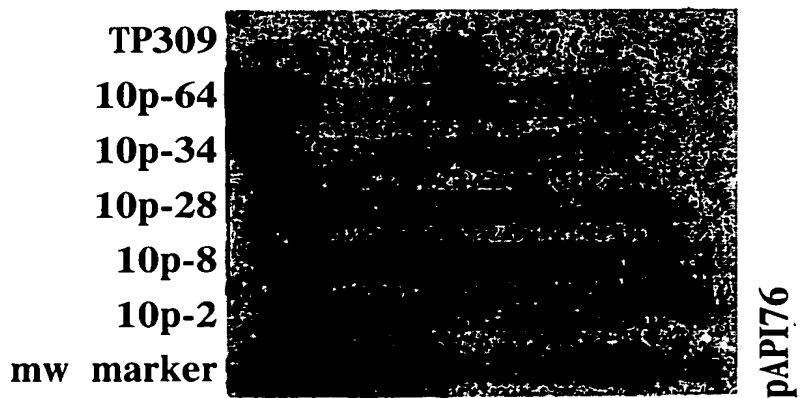


Fig. 2G

TP309 100-53 100-50 100-40 100-39 100-35 mw marker

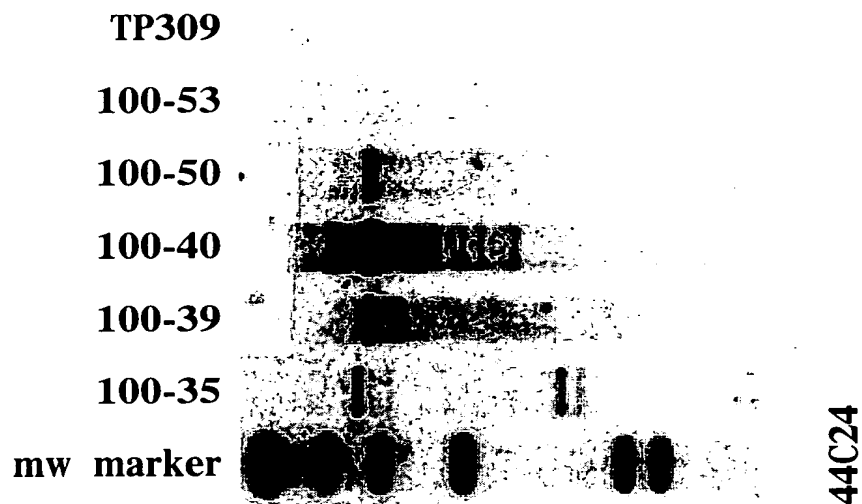


Fig. 4B



Fig. 4A

093228.084704

```

      10      20      30      40      50      60      70
CACCTAAATTGTAAGCGTTAATATTTTGTAAAAATTCGCGTTAAATTTTGTAAATCAGCTCATTTTTT
GTGGATTTAACATTCGCAATTATAAAACAATTTTAAGCGCAATTTAAAAACAATTTAGTCGAGTAAAAA

      80      90     100     110     120     130     140
AACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTG
TTGGTTATCCGGCTTTAGCCGTTTATAGGAATATTTAGTTTTCTTATCTGGCTCTATCCCAACTCACAAC

     150     160     170     180     190     200     210
TTCCAGTTTGGACAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTA
AAGGTCAAACCTTGTTCTCAGGTGATAATTTCTTGCACCTGAGGTTGCAGTTTCCCGCTTTTGGCAGAT

     220     230     240     250     260     270     280
TCAGGGCGATGGCCCACTACGTGAACCATCACCTAATCAAGTTTTTTTGGGGTCGAGGTGCCGTAAAGCA
AGTCCCGCTACCGGGTGATGCACTTGGTAGTGGGATTAGTTCAAAAAACCCAGCTCCACGGCATTTCGT

     290     300     310     320     330     340     350
CTAAATCGGAACCCTAAAGGGAGCCCCGATTTAGAGCTTGACGGGGAAAGCCGGCGAACGTGGCGAGAA
GATTTAGCCTTGGGATTTCCCTCGGGGGCTAAATCTCGAACTGCCCTTTCGGCCGCTTGACCCGCTCTT

     360     370     380     390     400     410     420
AGGAAGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACGCTGCGCGTAAC
TCCTTCCCTTCTTTCGCTTTCCTCGCCCGCGATCCCGCGACCGTTCACATCGCCAGTGCGACGCGCATTG

     430     440     450     460     470     480     490
CACCACACCCGCCGCGCTTAATGCGCCGCTACAGGGCGCGTCCCATTCGCCATTACAGGCTGCGCAACTGT
GTGGTGTGGGCGGCGCAATTACGCGGCGATGTCCCGCGCAGGGTAAGCGGTAAGTCCGACGCGTTGACA

     500     510     520     530     540     550     560
TGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCGAAAGGGGGATGTGCTGCAAGGC
ACCCTTCCCGCTAGCCACGCCCGGAGAAGCGATAATGCGGTGACCGCTTCCCCCTACACGACGTTCCG

     570     580     590     600     610     620     630
GATTAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTAAAACGACGGCCAGTGAATTGTAATA
CTAATTCAACCCATTGCGGTCCCAAAAGGGTCAGTGCTGCAACATTTTGCTGCCGGTCACTTAACATTAT

      >_Gns9_Promoter
      |
     640     650     660     670     680     690     700
CGACTCACTATAGGGCGAATTGGAGCTCAACTTTAGTCCATATATTTAGACACTAATTTAGAGTATTAAA
GCTGAGTGATATCCCGCTTAACCTCGAGTTGAAATCAGGTATATAAATCTGTGATTAAATCTCATAATTT

     710     720     730     740     750     760     770
TATAAATTACTTACAAAATAATTCAATAAATGAAAGCTAATTTGCGAGACAAATTTTTTATGTTTAATT
ATATTTAATGAATGTTTTGATTAAGTTATTTACTTTCGATTAAACGCTCTGTTTAAAAAATACAAATTAA
```

FIG. 5A

780	790	800	810	820	830	840
AATCCATAATTAGAGAATGTTTACTGTAGCATCACATAGACTAATCATGGATTAATTAGGCTCAATAGAT						
TTAGGTATTAATCTCTTACAAATGACATCGTAGTGTATCTGATTAGTACCTAATTAATCCGAGTTATCTA						
850	860	870	880	890	900	910
TCGTCTCGTGAATTAGTCCAAGATTATGGATGGATTTTATTAATAGTCTACGTTTAATATTTATAATTAG						
AGCAGAGCACTTAATCAGGTTCTAATACCTACCTAAAATAATTATCAGATGCAAATTATAAATATTAATC						
920	930	940	950	960	970	980
TGTTCAAACATCCGATGTGATAGGGACTTAAAAAGTTTAGTCCCATCTAAACAGGGCCACAGTCTATGTG						
ACAAGTTTGTAGGCTACACTATCCCTGAATTTTCAAATCAGGGTAGATTGTCCCGGTGTCAGATACAC						
990	1000	1010	1020	1030	1040	1050
GAGCATGTTCAACGAACACCGATAAATATTGCAAAGCCCAGAATGATTTTGGTCCCACATGCCAGAACT						
CTCGTACAAGTGGCTTGTGGCTATTTATAACGTTTCGGGTCTTACTAAAACCAGGGTGTACGGTCTTTGA						
1060	1070	1080	1090	1100	1110	1120
ACCACACCCACATTTTCGGTTCATTTTCAGCTCAGGAAAATCGTCCAACAATTTTCAGCTCAGGAAATTA						
TGGTGTGGGTGTAAAGCCAAGTAAAAGTCGAGTCCTTTTAGCAGGTTGTTAAAGTCGAGTCCTTTAATTT						
1130	1140	1150	1160	1170	1180	1190
TCGTCCGAGAAAGGAACAAGTTTGGAGCCGTTGGGATGAGAGCAATTAGGTCACGCTTAACCTACAAGTAC						
AGCAGGCTCTTTCCTTGTTCAAACCTCGGCAACCCTACTCTCGTTAATCCAGTGCGAATTGATGTTTCATG						
1200	1210	1220	1230	1240	1250	1260
AGTCTCATTTCATCGACATTGATTAGCCAGCAACTAACCACCTTAACCCCGAGCCAGCCCAAGCGCTCCGTA						
TCAGAGTAAGTAGCTGTAACTAATCGGTCGTTGATTGGTGAATTGGGGCTCGGTTCGGGTCGCGAGGCAT						
1270	1280	1290	1300	1310	1320	1330
CGTTCGTTGGGCCCCCGCCGCGCAGGCGGAGACAACGGTCATCCGGCGCGCCGGTTCGCTCTCCCTCGCTC						
GCAAGCAACCCGGGGGCGGCGCGTCCGCCTCTGTTGCCAGTAGGCCGCGCGGCCAGCGAGAGGGAGCGAG						
1340	1350	1360	1370	1380	1390	1400
GCACGGCCGCAACCACCACTTCGCCACGAACCCGACGCGAGCGCGACGTGCATCTCCCAACATCCCCGCC						
CGTGCCGGCGTGTTGGGTGAAGCGGTGCTTGGGCTGCGCTCGCGCTGCACGTAGAGGGTTGTAGGGGCGG						
1410	1420	1430	1440	1450	1460	1470
ATTTCTCCCCACCCAAAACCAACCCGCCGCGTGC GGCTGGCCCACTTTACAGCGCCTCACCTCCCCCA						
TAAAGGAGGGGTGGGTTTTGGTTGGGCGGGCGCACGCCGACCGGGTGAAATGTCGCGGAGTGAGGGGGT						
1480	1490	1500	1510	1520	1530	1540
ACCATAAATCCCCGCCCTTTTCCCCCCTCTCCACCACTCACCACGCTCTCCACTACACGACTCGTCGCC						
TGGTATTTAGGGGCGGGAAAAGGGGGGAGAGGTGGTGAGTGGTGCGAGAGGTGATGTGCTGAGCAGCGG						
1550	1560	1570	1580	1590	1600	1610
GTCTTGCTCTGCTGCCTCTCGCGCCCGCGCAGCAGTGAGCAGCAGCAAGAGCAGTCTAGGGGGATCTACC						
CAGAACGAGACGACGGAGAGCGCGGGCGCGTCGTCACTCGTCGTTCTCGTCAGATCCCCCTAGATGG						

FIG. 5B


```

      1620      1630      1640      1650      1660
ATG AGC CCA GAA CGA CGC CCG GCC GAC ATC CGC CGT GCC ACC GAG GCG GAC ATG
TAC TCG GGT CTT GCT GCG GGC CGG CTG TAG GCG GCA CGG TGG CTC CGC CTG TAC
  M   S   P   E   R   R   P   A   D   I   R   R   A   T   E   A   D   M>
__a__a__a__a__a__a__a__a__a__BAR GENE__a__a__a__a__a__a__a__a__>

      1670      1680      1690      1700      1710
CCG GCG GTC TGC ACC ATC GTC AAC CAC TAC ATC GAG ACA AGC ACG GTC AAC TTC
GGC CGC CAG ACG TGG TAG CAG TTG GTG ATG TAG CTC TGT TCG TGC CAG TTG AAG
  P   A   V   C   T   I   V   N   H   Y   I   E   T   S   T   V   N   F>
__a__a__a__a__a__a__a__a__a__BAR GENE__a__a__a__a__a__a__a__a__>

      1720      1730      1740      1750      1760
1770
CGT ACC GAG CCG CAG GAA CCG CAG GAG TGG ACG GAC GAC CTC GTC CGT CTG CGG
GCA TGG CTC GGC GTC CTT GGC GTC CTC ACC TGC CTG CTG GAG CAG GCA GAC GCC
  R   T   E   P   Q   E   P   Q   E   W   T   D   D   L   V   R   L   R>
__a__a__a__a__a__a__a__a__a__BAR GENE__a__a__a__a__a__a__a__a__>

      1780      1790      1800      1810      1820
GAG CGC TAT CCC TGG CTC GTC GCC GAG GTG GAC GGC GAG GTC GCC GGC ATC GCC
CTC GCG ATA GGG ACC GAG CAG CGG CTC CAC CTG CCG CTC CAG CGG CCG TAG CGG
  E   R   Y   P   W   L   V   A   E   V   D   G   E   V   A   G   I   A>
__a__a__a__a__a__a__a__a__a__BAR GENE__a__a__a__a__a__a__a__a__>

      1830      1840      1850      1860      1870      1880
TAC GCG GGC CCC TGG AAG GCA CGC AAC GCC TAC GAC TGG ACG GCC GAG TCG ACC
ATG CGC CCG GGG ACC TTC CGT GCG TTG CGG ATG CTG ACC TGC CGG CTC AGC TGG
  Y   A   G   P   W   K   A   R   N   A   Y   D   W   T   A   E   S   T>
__a__a__a__a__a__a__a__a__a__BAR GENE__a__a__a__a__a__a__a__a__>

      1890      1900      1910      1920      1930
GTG TAC GTC TCC CCC CGC CAC CAG CGG ACG GGA CTG GGC TCC ACG CTC TAC ACC
CAC ATG CAG AGG GGG GCG GTG GTC GCC TGC CCT GAC CCG AGG TGC GAG ATG TGG
  V   Y   V   S   P   R   H   Q   R   T   G   L   G   S   T   L   Y   T>
__a__a__a__a__a__a__a__a__a__BAR GENE__a__a__a__a__a__a__a__a__>

      1940      1950      1960      1970      1980
CAC CTG CTG AAG TCC CTG GAG GCA CAG GGC TTC AAG AGC GTG GTC GCT GTC ATC
GTG GAC GAC TTC AGG GAC CTC CGT GTC CCG AAG TTC TCG CAC CAG CGA CAG TAG
  H   L   L   K   S   L   E   A   Q   G   F   K   S   V   V   A   V   I>
__a__a__a__a__a__a__a__a__a__BAR GENE__a__a__a__a__a__a__a__a__>

      1990      2000      2010      2020      2030
2040
GGG CTG CCC AAC GAC CCG AGC GTG CGC ATG CAC GAG GCG CTC GGA TAT GCC CCC
CCC GAC GGG TTG CTG GGC TCG CAC GCG TAC GTG CTC CGC GAG CCT ATA CGG GGG
  G   L   P   N   D   P   S   V   R   M   H   E   A   L   G   Y   A   P>
  a   a   a   a   a   a   a   a   BAR GENE   a   a   a   a   a   a   a   >

```

FIG. 5C

2670	2680	2690	2700	2710	2720	2730
TAACTCACATTAATTGCGTTGCGCTCACTGCCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATT						
ATTGAGTGTAATTAACGCAACGCGAGTGACGGGCGAAAGGTCAGCCCTTTGGACAGCACGGTCGACGTAA						
2740	2750	2760	2770	2780	2790	2800
AATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTTCGTATTGGGCGCTCTTCCGCTTCCTCGCTCACTGA						
TTACTTAGCCGGTTGCGCGCCCCTCTCCGCCAAACGCATAACCCGCGAGAAGGCGAAGGAGCGAGTGACT						
2810	2820	2830	2840	2850	2860	2870
CTCGCTGCGCTCGGTTCGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCC						
GAGCGACGCGAGCCAGCAAGCCGACGCCGCTCGCCATAGTCGAGTGAGTTTCCGCCATTATGCCAATAGG						
2880	2890	2900	2910	2920	2930	2940
ACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAA						
TGTCTTAGTCCCCTATTGCGTCCTTTCTTGTAACACTCGTTTTCCGGTCGTTTTCCGGTCCTTGGCATTTT						
2950	2960	2970	2980	2990	3000	3010
AGGCCGCGTTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCCTGACGAGCATCACAAAAATCGACGCTCAAG						
TCCGGCGCAACGACCGCAAAAAGGTATCCGAGGCGGGGGGACTGCTCGTAGTGTTTTTAGCTGCGAGTTC						
3020	3030	3040	3050	3060	3070	3080
TCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCCTGGAAGCTCCCTCGTGCGC						
AGTCTCCACCGCTTTGGGCTGTCCTGATATTTCTATGGTCCGCAAAGGGGGACCTTCGAGGGAGCACGCG						
3090	3100	3110	3120	3130	3140	3150
TCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTT						
AGAGGACAAGGCTGGGACGGCGAATGGCCTATGGACAGGCGGAAAGAGGGAAGCCCTTCGCACCGCGAAA						
3160	3170	3180	3190	3200	3210	3220
CTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTTAGGTTCGCTCCAAGCTGGGCTGTGTGCACGA						
GAGTATCGAGTGCGACATCCATAGAGTCAAGCCACATCCAGCAAGCGAGGTTCGACCCGACACACGTGCT						
3230	3240	3250	3260	3270	3280	3290
ACCCCCCGTTTACGCCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACAC						
TGGGGGGCAAGTCGGGCTGGCGACGCGGAATAGGCCATTGATAGCAGAACTCAGGTTGGGCCATTCTGTG						
3300	3310	3320	3330	3340	3350	3360
GACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAG						
CTGAATAGCGGTGACCGTCGTCGGTGACCATTTGTCTTAATCGTCTCGCTCCATACATCCGCCACGATGTC						
3370	3380	3390	3400	3410	3420	3430
AGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGTGAA						
TCAAGAACTTCACCACCGGATTGATGCCGATGTGATCTTCTGTGCATAAACCATAGACGCGAGACGACTT						
3440	3450	3460	3470	3480	3490	3500
GCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGT						
CGGTCAATGGAAGCCTTTTTCTCAACCATCGAGAACTAGGCCGTTTGTGGTGGCGACCATCGCCACCA						

FIG. 5E

3510 3520 3530 3540 3550 3560 3570
 TTTTTTGTTCGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTA
 AAAAAACAAACGTTTCGTCTAATGCGCGTCTTTTTTCTAGAGTTCTTCTAGGAACTAGAAAAGAT

 3580 3590 3600 3610 3620 3630 3640
 CGGGGTCTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGAT
 GCCCCAGACTGCGAGTCACCTTGCTTTGAGTGCAATTCCTAAAACCAGTACTCTAATAGTTTTTCCTA

 3650 3660 3670 3680 3690 3700 3710
 CTTACCTAGATCCTTTTAAATTAAAAATGAAGTTTAAATCAATCTAAAGTATATATGAGTAACTTGG
 GAAGTGGATCTAGGAAAATTTAATTTTACTTCAAATTTAGTTAGATTTCATATATACTCATTTGAACC

 3720 3730 3740 3750 3760 3770 3780
 TCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCCATAG
 AGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTCGCTAGACAGATAAAGCAAGTAGGTATC

 3790 3800 3810 3820 3830 3840 3850
 TTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAAT
 AACGGACTGAGGGGCAGCACATCTATTGATGCTATGCCCTCCCGAATGGTAGACCGGGGTACGACGTTA

 3860 3870 3880 3890 3900 3910 3920
 GATACGCGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAG
 CTATGGCGCTCTGGGTGCGAGTGGCCGAGGTCTAAATAGTCGTTATTTGGTCGGTCGGCCTTCCCGGCTC

 3930 3940 3950 3960 3970 3980 3990
 CGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGTTGCCGGAAGCTAGAGTAA
 GCGTCTTACCAGGACGTTGAAATAGGCGGAGGTAGGTAGGTCAGATAATTAACAACGGCCCTTCGATCTCATT

 4000 4010 4020 4030 4040 4050 4060
 GTAGTTCGCCAGTTAATAGTTTTCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTC
 CATCAAGCGGTCAATTATCAAACGCGTTGCAACAACGGTAACGATGTCCGTAGCACACAGTGCGAGCAG

 4070 4080 4090 4100 4110 4120 4130
 GTTTGGTATGGCTTCATTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGC
 CAAACCATAACCGAAGTAAGTCGAGGCCAAGGGTTGCTAGTTCCGCTCAATGTACTAGGGGGTACAACACG

 4140 4150 4160 4170 4180 4190 4200
 AAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTTGTGAGAAGTAAGTTGGCCGAGTGTTATCACTCA
 TTTTTTCGCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCATTCAACCGGCGTCACAATAGTGAGT

 4210 4220 4230 4240 4250 4260 4270
 TGGTTATGGCAGCACTGCATAATTCTCTTACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGA
 ACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACT

 4280 4290 4300 4310 4320 4330 4340
 GTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGGCGTCAATACGG
 CATGAGTTGGTTCAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGGGCCGAGTTATGCC

FIG. 5F

4350 4360 4370 4380 4390 4400 4410
 GATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTTGGAAAACGTTCTTCGGGGCGAAAAC
 CTATTATGGCGCGGTGTATCGTCTTGAAATTTTCACGAGTAGTAACCTTTTGCAAGAAGCCCCGCTTTTG

 4420 4430 4440 4450 4460 4470 4480
 TCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGC
 AGAGTTCCTAGAATGGCGACAACCTTAGGTCAAGCTACATTGGGTGAGCACGTGGGTGACTAGAAAGTCG

 4490 4500 4510 4520 4530 4540 4550
 ATCTTTTACTTTTACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATA
 TAGAAAATGAAAGTGGTCGCAAAGACCCACTCGTTTTTGTCTTCCGTTTTACGGCGTTTTTTCCTTAT

 4560 4570 4580 4590 4600 4610 4620
 AGGGCGACACGGAAATGTTGAATACTCATACTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTT
 TCCCGCTGTGCCTTTACAACCTTATGAGTATGAGAAGGAAAAAGTTATAATAACTTCGTAAATAGTCCCAA

 4630 4640 4650 4660 4670 4680 4690
 ATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTCGCGCACATT
 TAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTTATTTGTTTATCCCCAAGGCGCGTGTA

 4700
 TCCCCGAAAAGTGC
 AGGGGCTTTTCACG

FIG. 5G

102180" 8222660